

EFFECT OF INVOLVEMENT LEVEL ON MAIL PANEL SURVEY RESPONSE RATES

Mark E. Havitz

Associate Professor, Department of Recreation and Leisure
Studies, University of Waterloo, Waterloo, Ontario, Canada
N2L 3G1

Dennis R. Howard

Coordinator and Professor, Sport Management Program, The
Ohio State University, Columbus, OH 43210-1284

A panel survey of golfers, skiers and windsurfers was conducted using mail questionnaires which were distributed three times over the course of a calendar year; in-season, off-season, and pre-season. Respondents' levels of enduring activity involvement were measured using Laurent and Kapferer's (1985) Involvement Profile scale. No support was found for the hypothesis that panel dropouts would be less involved with the activity than would those who completed all three data collection phases.

Introduction

Leisure research has a rich tradition of survey-based studies and critiques related to sampling techniques and response rates abound (e.g., Choi, Ditton and Matlock 1992; Dolsen and Machlis 1991; Wellman, Hawk, Roggenbuck and Buhyoff 1980). However, the performance of leisure researchers regarding the reporting of response bias checks for their survey research remains mixed. Fewer than 35% of empirical studies in the *Journal of Leisure Research* and *Leisure Sciences* since 1990 reported a response bias check. The purpose of this study was to investigate possible sampling biases that may result from the level of activity involvement held by potential survey respondents. Specifically, it was hypothesized that sample members with high activity involvement scores would be more likely to respond to repeated mailings in a panel survey study than would sample members with low activity involvement scores.

Involvement is an unobservable state of motivation, arousal or interest that is evoked by a particular stimulus or situation and has drive properties (Rothschild 1984). In leisure research the particular stimulus generally refers to an activity context (e.g., Backman and Crompton, 1990; Dimanche, Havitz and Howard 1991; McIntyre 1989; McCarville, Crompton and Sell 1992; Norman 1991). Drive properties generally refers to the presumed influence of involvement on purchase decisions and on leisure behavior (see Reid and Crompton 1993 for a theoretical discussion of purchase decision issues). Indeed, involvement level has been linked to decisions such as whether or not to travel for pleasure (Norman 1991), to continue or discontinue recreation participation (Backman and Crompton, 1990), length of participation, frequency of participation, and money spent on recreation related products (Howard and Havitz 1993).

The advantages and disadvantages of mail surveys in comparison with other data collection methods have been widely discussed (Dillman 1983). Random sampling is often used to ensure that the sample is reasonably representative of the broader target population to which results are to be generalized. Babbie (1992, p. 197) argued that "a sample will be representative of the population from which it is selected if all members of the population have an equal chance of being selected in the sample." Theoretically, random sampling eliminates problems related to noncoverage. However, Frankel (1983, p. 24) noted that survey populations may "differ from the target population because of noncoverage and non-response." Nonresponse is generally more difficult to address than is noncoverage because simple inclusion

within a survey sample frame provides no guarantees that subjects will actually respond.

The affect of issue salience as a moderating variable on response rates is often implied. Intuitively, it seems likely that Audubon Society members would be more predisposed to respond to a survey on birding than would members of the general population. This may seem like an extreme example, nevertheless much leisure research is conducted on populations with relatively diverse levels of activity commitment and controls for issue salience among survey respondents are seldom reported. The Involvement Profile (IP) scale (Laurent & Kapferer 1985; Dimanche et al. 1991) may provide a promising method for measuring issue salience among respondents and nonrespondents alike.

Method

Sample and Data Collection

Respondents were selected from physical education activity classes related to golf, downhill skiing, or windsurfing at a large west coast university. These classes were open to all undergraduate and graduate students enrolled at the university, thus respondents represented numerous academic majors (leisure studies majors comprised less than five percent of the sample). Golf and downhill skiing classes were available at four different levels: beginner, intermediate, advanced, and competitive. Windsurfing classes were offered at two levels: beginner and intermediate/advanced. This mix ensured a reasonably wide range of activity involvement among members of the sample. Respondents were recruited to complete the study only in the context of the activity for which they were enrolled.

The questionnaire was initially completed *in-season*. Questionnaires were distributed in February for downhill skiing and in May/June for golf and windsurfing. Respondents were recruited in-class by a principal investigator who explained the voluntary nature of the study and the explained the data collection procedures. Respondents were notified that some of them would receive follow-up questionnaires in several months. All students in attendance during the recruitment procedure were invited to participate. Over 90 percent of the potential respondents agreed to participate in the research by completing the in-season questionnaire.

Respondents who completed usable questionnaires were mailed the second questionnaire several months after the in-season data collection. Postcard reminders were sent to all participants one week later. Non-respondents were sent replacement questionnaires one week after the postcard was mailed (two weeks after the initial second contact). Non-respondents were also contacted by phone whenever possible. *Off-season* data collection occurred in May/June for downhill skiing and in November/December for golf and windsurfing.

Several months later, the third questionnaire was mailed to all respondents who responded to the off-season data collection. Identical procedures to those used in the off-season were followed during this *pre-season* data collection. The pre-season data collection occurred in October/November for downhill skiing and in February/March for golf and wind-surfing.

Questionnaire

All data were collected with paper and pencil questionnaires. The questionnaire also included socio-demographic items and behavioral questions related to respondents' participation and purchase patterns and an 18-item version (three items each purporting to measure six facets of involvement) of the Involvement Profile (IP) scale written in the context of one of the three recreational activities.

There is general agreement that involvement has multiple facets. Importance, pleasure, sign, risk probability, risk consequences, and centrality have received support from various researchers (Havitz and Dimanche 1990). The IP scale was developed to measure five facets: 1) the importance of the product class to the

individual; 2) the pleasure or hedonic value derived from the product; 3) the sign or symbolic value (what a participant's perception of what her/his participation says about her/him to other people) attributed to the product; 4) the risk probability associated with a potential mispurchase; and 5) the risk consequences associated with a mispurchase (Laurent and Kapferer 1985). The sixth facet, centrality, has received support primarily in the leisure literature (McIntyre 1989; Siegenthaler and Lam 1992; Watkins, 1986). Centrality refers to the extent to which a participant's lifestyle and social networks revolve around a recreational activity.

The IP scale has been subjected to tests of trait and discriminant and convergent validity, multiproduct fit, reliability (internal consistency), and known group tests of construct validity (viz., Laurent and Kapferer 1985; Havitz, Dimanche and Howard 1993). The IP scale performed well in these studies and is probably the most widely used involvement scale in leisure research. Ten leisure involvement studies have been reported in the past four years using the IP scale. Factor analyses indicated in eight of the 10 data sets that the importance and pleasure facets merge in leisure contexts. This composite importance-pleasure facet has been labeled the attachment facet by some researchers. It represents an interesting derivation from research with consumer goods where the combination is rarely reported, and then only in the case of products, such as chocolate, which have hedonic properties (Zaichkowsky 1990).

Despite the small number of items in each IP subscale, the internal consistency of the various subscales has been consistently high across the 10 data sets. Importance/pleasure (or attachment) alphas have ranged from .69 to .89 (above .80 in eight of 10 studies); sign (or self expression) alphas have ranged from .66 to .96 (above .80 in six of 10 studies); risk probability alphas have ranged from .57 to .90 (over .80 in three of seven studies); and risk consequence alphas have ranged from .60 to .89 (over .70 in three of seven studies). McIntyre did not include risk items in either of his questionnaires and the risk dimensions failed to achieve eigenvalues of 1.0 in the Madrigal et al. research. Centrality alphas (only reported in the two McIntyre data sets) were .64 and .70. The risk facets have been criticized by some researchers as not directly applicable to enduring involvement (Mittal 1989; McIntyre 1989). In addition, factor analyses have consistently shown risk facet eigenvalues to be lower than those of other facets. Nevertheless, risk facets have received theoretical support in the literature (Havitz and Dimanche 1990; Laurent and Kapferer 1985) and have provided valuable information in several involvement studies.

Response

Over 90% of approximately 300 potential respondents completed the in-season questionnaire. All 282 in-season respondents were sent second round questionnaires. Current addresses could not be located for twenty-seven (9.6%) respondents during the off-season data collection and an additional seven (2.4%) addresses were unavailable during the pre-season data collection. Correcting for non-deliverable questionnaires, 69% of first round respondents completed the second round (off-season) questionnaire and over 52% of first round respondents completed the third round (pre-season) questionnaire. Response rates were highest for downhill skiing and lowest for boardsailing.

Comparison of the socio-demographic and behavioral characteristics of members of the present sample with the characteristics of a representative sample of American adult golfers and downhill skiers (data were not available for boardsailing) showed that the present sample over represented females, younger adults, singles, and highly educated people (Simmons Market Research Bureau 1991). As a group, members of the present sample also participated at above average rates (about 20 times per year for all three activities). Fewer than one third of adult golfers and 10% of adult skiers participate 20 or more times annually (Simmons Market Research Bureau 1991).

Results

Prior to hypothesis testing, the factor structure of the revised IP scale was examined in both activity and product contexts using principal components and principal axis factoring procedures and internal consistency scores (Cronbach's alpha) were obtained. These measures revealed a four-factor structure (importance, pleasure and centrality items generally loaded on one factor) and reliability levels consistent with past leisure involvement research. Several items with mixed or low loadings were not included in the hypothesis test. Males were over represented in the single response group whereas over half of the two and three response group were female ($X^2 = 9.92$; $df = 2$; $p < .01$). Although not statistically significant at conventional alpha levels, mean age of respondents ($F = 2.66$; $df = 2, 273$; $p = .07$) showed a pattern whereby older respondents were over represented in the single response group. Therefore sex and age were included as independent variables along with involvement scores (four facets including importance-pleasure, sign, risk probability and risk consequence) in the hypothesis test. The dependent variable was response pattern over the course of the panel survey. Multivariate analysis of variance (MANOVA) revealed no significant relationship between the independent variables and panel response patterns (Multivariate $F = 1.06$; $df = 16, 1032$; $p < .39$). Thus, the hypothesis was not supported.

Discussion and Implications

Long standing concern has been expressed regarding the extent to which survey respondents accurately represent the populations from which they are drawn. This concern will become more pronounced in the future if leisure research evolves from its heavy reliance on cross-sectional methodologies to a greater proportion of longitudinal inquiry as has been predicted and advocated. In general, the results provide good news for leisure researchers conducting panel surveys through the mail. Significant differences in IP scores among one, two and three time respondents would have suggested that response patterns were biased by respondents' levels of enduring activity involvement. Such differences could call into question the reliability and validity of panel research efforts. The results are especially interesting given their contrast to the demonstrated usefulness of involvement profiles in predicting behavior and for segmenting recreation markets.

Several limitations should be noted regarding this exploratory effort. First, no attempt was made to compare involvement levels of non-respondents with those who responded at least once. Such a test would have been difficult to conduct both because fewer than 20 potential respondents declined participation and because no measure of enduring involvement was obtained for members of that group. These results cannot be generalized from panel surveys to cross-sectional surveys. Second, the activity contexts were limited. Third, survey methods (e.g., telephone) other than mail surveys were not examined. Finally, the length of the panel survey was relatively short and was completed within the span of one year. This study should be replicated in a more activity contexts, over longer periods of time, and conducted in other survey contexts before definitive statements regarding response rates and enduring involvement levels can be made.

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